REMARKS

This amendment is responsive to the Final Office Action of March 4, 2009. Reconsideration and allowance of **claims 1-6, 14, 17, 20-24, and 26-27** are requested.

The Office Action

Claims 16 and 17 stand rejected under 35 U.S.C. 101.

Claims 1-3, 7-10, 13, 16, 17, 20-22, and 26 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Goren (U.S. Patent No. 7,069,025).

Claims 4-6, 23, and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goren in view of Diener (U.S. Patent No. 7,006,838).

Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goren in view Rudowicz (U.S. Patent No. 6,052,561).

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goren *taken alone*.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goren, in view of Sanderford (U.S. Patent No. 5,742,635).

Claim 27 is not rejected on art and is understood to contain allowable subject matter.

The Amendment Should be Entered

Applicant respectfully requests that the Examiner enters the present amendment.

First, the finality of the Office Action is premature because in Amendment C, **claim 27** was not substantively amended. Specifically, in Amendment C, **claim 27** was placed in independent form including all of the subject matter of it parent claims 1, 2, 3.

Secondly, Applicant submits that this Amendment After Final Rejection places this application in condition for allowance by amending claims in a manner that is believed to render all pending claims allowable over the cited art and/or at least place this application in better form for appeal.

Third, this Amendment reduces the issues on appeal by addressing a grammatical error in **claim 27**.

Fourth, the amendment places the application in better condition for appeal by cancelling claims 1, 7-13, 15, and 16.

Specification

It is respectfully submitted that the computer-readable *medium* carrying software code is defined in the specification. The specification recites on page 2 lines 6-13 "there is also provided a computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for performing the method of the present invention when said product is run on a computer." The medium carrying the software code is the internal memory of a digital computer.

35 U.S.C. 101

It is respectfully submitted that **claim 17** is directed to statutory subject matter. **Claim 17** is tied to a particular machine or apparatus. **Claim 17** is tied to a computer-readable medium on a computer. A computer-readable medium carrying software code defines structural and functional interrelationships between the software code and the computer software and hardware components which permit the software code's functionality to be realized, and is thus statutory.

The Claims Distinguish Patentably
Over the References of Record

More specifically, regarding **claim 2**, Goren does not disclose applying at least one test on the received signals prior to processing the signals; wherein applying the test comprises determining whether a signal level of the received signal is above a threshold value and in accordance with the applied test, selecting one of: a correlation processing operation and a leading edge processing operation. The Office Action refers Applicant to Fig. 15 and Col. 22 lines 43-59 which discloses the method for identifying the time of arrival of wireless assets in a wireless communications system. More specifically, step (1570) evaluates a correlation function to generate a correlation function quality value. The correlation quality may be quantified using an

objective measure such as a signal-to-noise ratio or other suitable index. If the quality is sufficiently high, the estimated time of arrival (TOA) is calculated at (1580). In step (1580) channel estimation (1590) is used to estimate the TOA if line of sight peak is separated from multipath peak. In step (1590) the leading edge of line of sight peak is defined as the TOA of the communication sequence. In step (1580) leading edge detection is used to estimate the TOA if line of sight peak overlaps or merge with multipath peak. In step (1585) the leading edge of the merged pulse is defined as the TOA.

In Goren, relied upon by the Examiner, the processing operation is selected based on whether the sight peak is separated or overlaps the multipath peak. It is only by the analysis of the peaks that the TOA is estimated by either by channel estimation or leading edge detection. Goren does not disclose applying a test to prior to processing the received signals determine whether a signal level is above a *threshold value*. Additionally, Goren does not disclose selecting either a correlation processing operation or a leading edge processing operation based on the determination of whether the signal level of the received signals is above a *threshold value*.

Accordingly it is submitted that independent **claim 2** and **claims 3-4, 6-13 and 15** that depend therefrom distinguish patentable over the references of record.

Claim 3 calls for in response to the level of the received signal being below the threshold value, selecting the correlation processing operation. Goren does not disclose determining whether the signal level of the received signals is above a threshold value for the reasons state above. Additionally, Goren does not disclose selecting the correlation processing operation if the signal level of the received signal is below a threshold value.

Claim 4 calls for when the level of the received signal is above the threshold value, testing whether a leading edge gradient is above a gradient threshold value. Neither Goren nor Diener disclose or fairly suggest determining whether the signal level of the received signal is above a threshold value or testing whether a leading edge gradient is above a gradient threshold value when the received signal level is above a threshold value.

Regarding **claim 5**, Goren does not disclose the steps of:

applying at least one test on the received signals to select a processing operation on the signals, the operation being one of the following: a correlation processing operation and a leading edge processing operation;

wherein the applied test comprises:

determining whether a signal level of the received signal is above a threshold value;

when the level of the received signal is below the threshold value, selecting the correlation processing operation;

when a leading edge gradient is below a gradient threshold value, selecting the leading edge processing operation;

Goren discloses determining whether sight peak is separated or overlaps the multipath peak. In response to this determination selecting either channel estimation or leading edge detection to estimate the TOA. Goren does not disclose applying a test to prior to processing the received signals determine whether a signal level is above a *threshold value* and selecting a correlation processing operation if the received signal level is below the threshold value. Additionally, Goren does not disclose another test to determine whether a leading edge gradient is below a gradient threshold value and in response to the leading edge gradient being below a gradient threshold selecting a leading edge processing operation. Diener referenced by the Examiner fails to cure these shortcomings. Diener describe an operation in which the receiving device determines what kind of signal is being received, e.g., a frequency hopper, a cordless telephone, Bluetooth™, IEEE 802.11x, infant monitor, etc.

Claim 6 calls for in response to the leading edge gradient being above the gradient threshold value, selecting the correlation processing operation. Neither Goren nor, Diener disclose testing whether a leading edge gradient is above a gradient threshold value when the received signal level is above a threshold value. Additionally, Neither Goren nor, Diener disclose selecting a correlation processing operation when the leading edge gradient is above a gradient threshold value.

Regarding **claim 14**, Goren does not disclose applying at least one test on the received signals prior to processing the signals to select a processing operation

on the signals, the operation being one of the following: a correlation processing operation, and a leading edge processing operation. In Goren, relied upon by the Examiner, processing of the signal to estimate the TOA is processed depending on whether the correlation function has sufficient quality. It is only when the correlation function has sufficient quality that a another test is done to determine whether a channel estimation processing operation or leading edge detection processing operation should be selected to process the received signals. Goren does not disclose applying a test to determine a signal to noise ratio of the received signal in order to select either a correlation processing operation or a leading edge processing operation. In contrast to Goren, a processing operation is always selected even if the signal to noise ratio (quality of the signal) falls beneath a threshold value.

Additionally, the Examiner asserts official notice that measuring a gradient using the formula in **claim 14** is well known in the art and obvious to one of ordinary skill in the art at the time of the invention. Applicant respectfully traverses this attempted use of Official Notice as improper. Consequently, a necessary element of a *prima facie* case is absent.

Firstly, Official Notice, is only proper for facts. (*MPEP § 2144.03*). Indeed, Official Notice is only permissible for those few facts that are of a "notorious character" and that are "capable of instant and unquestionable demonstration". (*MPEP § 2144.03(A)*). It is improper to use Official Notice for conclusions of law.

Secondly, the Office Action relies on Official Notice as the "principal evidence" upon which the rejection of **claim 14** is based. Official Notice cannot be used in this manner. As Section 2144.03(A) of the *MPEP* expressly warns, it is never appropriate to rely solely on Official Notice as the principal evidence upon which a rejection was based. Instead, Official Notice is only appropriate for facts and that serve to "fill in the gaps" in a rejection. (*MPEP § 2144.03(A)*). This is why official notice is to be judicially applied. (*MPEP § 2144.03*). It is unreasonable to conclude that the Office has used Official Notice to "fill in" a gap in this rejection.

Proper use of Official Notice requires compliance with several obligations expressly set forth in the *Manual of Patent Examining Procedure*. The Office has failed to meet these obligations. Specifically, the Office has failed to satisfy its obligations under *MPEP § 2144.03*. *MPEP § 2144.03 (B)*, for example, expressly

requires the Office to provide specific factual findings predicated on sound technical and scientific reasoning to support taking Official Notice. The *MPEP* goes on to explain that this means that the Office should present an Applicant with the explicit basis on which Official Notice is based so that the Applicant is able to challenge the assertion in the next reply after the Office action. (*MPEP §2144.03(B)*). Naked assertions about what is allegedly known in the art, like those made in the Office Action, cannot satisfy these requirements.

In sum, the Office's attempts at Official Notice are improper and traversed. Consequently, there are evidentiary gaps in the rejection of **claim 14** that are fatal to a *prima facie* case of obviousness.

Claim 17 calls for applying at least one test on the received signals prior to processing the received signals to select among selectable processing operations for processing the signals. Goren discloses processing of the signal to estimate the TOA is processed depending on whether the correlation function has sufficient quality. It is only when the correlation function has sufficient quality that another test is done to determine an operation process. Goren does not disclose testing the noise degradation and multi-path degradation of the received signal and in response to this test selecting a processing operation. In contrast to Goren, a processing operation is always selected even if the received signal is not of sufficient quality.

Claim 20 calls for the steps of:

testing means for testing the received radio frequency signals, which have not been subject to a correlation processing operation, for at least noise degradation and multi-path degradation and selecting one of:

a correlation processing operation and

a leading edge processing operation based on the testing;

More specifically, Goren does not disclose testing the received radio frequency signals for at least noise degradation and multi-path degradation and selecting one of: a correlation processing operation and a leading edge processing operation based on the testing. Goren discloses evaluating a correlation function to generate a correlation function quality value. If the quality is sufficiently high, processing the signal to estimate TOA. Goren discloses processing of the signal to estimate the TOA is processed depending on whether the correlation function has

sufficient quality. Goren does not disclose testing the noise degradation and multi-path degradation of the received signal and in response to this test selecting a processing operation.

Claim 21 calls for wherein the testing means includes: means to determine whether a signal level of the received radio frequency signal is above a threshold value. Goren discloses the processing operation is selected based on whether the sight peak is separated or overlaps the multipath peak. Goren does not disclose applying a test to prior to processing the received signals determine whether a signal level is above a *threshold value.*

Claims 22 calls for wherein the testing means includes: means which selects the correlation processing operation in response to the signal level of the received signal being below the level threshold value. Goren does not disclose determining whether the signal level of the received signals is above a threshold value for the reasons state above. Additionally, Goren does not disclose selecting the correlation processing operation if the signal level of the received signal is below a threshold value.

Claim 23 calls for wherein the testing means includes: means to test signals with signal level above the level threshold value to determine whether the signal has a leading edge gradient above a gradient threshold value. Neither Goren nor, Diener disclose determining whether the signal level of the received signal is above a threshold value or testing whether a leading edge gradient is above a gradient threshold value when the received signal level is above a threshold value.

Claim 24 calls for testing means includes: means which selects the leading edge processing operation in response to the leading edge gradient being below the gradient threshold value. Neither Goren nor, Diener disclose testing whether the signal is above a threshold value and another test to whether a leading edge gradient is below a gradient threshold value and in response to the leading edge gradient being below a gradient threshold selecting a leading edge processing operation.

Claim 27 has not been expressly rejected on art. There being no outstanding rejection, claim 27 is understood to be allowable. Moreover, neither Goren nor, Diener disclose applying at least one test on the received signals prior to

processing the signals to select between a correlation processing operation and a leading edge processing operation, the test including: determining whether a signal level of the received signal is above a threshold value. Goren discloses the processing operation to estimate the TOA is selected based on whether the sight peak is separated or overlaps the multipath peak. Goren does not disclose applying a test to prior to processing the received signals determine whether a signal level is above a *threshold value*. Diener referenced by the Examiner fails to cure these shortcomings. Additionally, neither Goren, nor Diener disclose or fairly suggest selecting either a correlation processing operation or a leading edge processing operation based on the determination of whether the signal level of the received signals is above a *threshold value*.
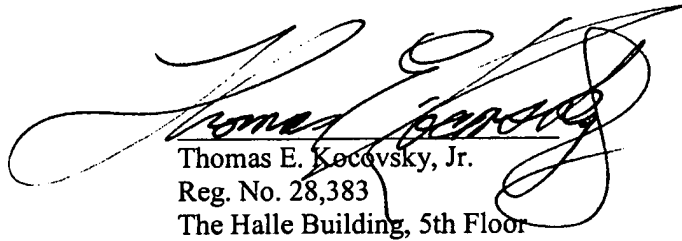
CONCLUSION

For the reasons set forth above, it is submitted that **claims 1-6, 14, 17, 20-24, and 26-27** distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is requested to telephone Thomas Kocovsky at (216) 363-9000.

Respectfully submitted,

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